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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/584,093

06/16/2006

Hyun-Seok Choi

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EXAMINER

ALPHONSE, FRITZ

ART UNIT

PAPER NUMBER

2112

MAIL DATE

DELIVERY MODE

10/15/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/584,093	Applicant(s) CHOI, HYUN-SEOK	
	Examiner FRITZ ALPHONSE	Art Unit 2112	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5, 15</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. This Office Action is in regard to Preliminary Amendment filed on 6/16/2006. Claims 1-22 are presented for examination.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

3. The Information Disclosure Statement (IDS) submitted on 6/16/2006 has been considered by the examiner.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 18 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 18 is directed to claiming “A computer-readable storage medium...” The computer-readable storage medium ... is not a statutory subject matter, because the specification (see page 7, paragraph 0036) defines computer-readable medium as “...optical storage medium, and a carrier wave storage medium...” which are not statutory subject matter. A “computer-readable storage medium” is not a process, or machine, or manufacture, or composition of matter to be a patentable subject matter.

Applicant (s) is/are advised to amend the specification in order to overcome the 101 rejection.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Alferness (U.S. Pat. No. 5,701,316).

As to claim 1, Alferness (fig. 2-4) shows a checksum generation apparatus (col. 1, lines 15-20), including a control unit (fig. 3, Transmission Control protocol /TCP 28) which outputs a control signal when an amount of data corresponding to a predetermined length is received (col. 6, lines 12-34). Alferness teaches an addition unit which performs an addition on the received data, and, in response to the control signal, outputs an addition result (col. 1, lines 63 through col. 2 line 13); and a conversion unit which converts the addition result to a checksum (McCoy teaches conversion of bit format to a word format (col. 3, lines 39-53).

As to claims 2-3, Alferness discloses a checksum generation apparatus, wherein the checksum has a value of 16 bits (fig. 11); the addition unit receives data in units of $n \times 16$ bits, and performs an addition on the received data (col. 10, lines 4-39).

As to claims 4-8, Alferness discloses a checksum generation apparatus, wherein the conversion unit divides the addition result into a sum and a carry (table 1, 2), partitions the sum into 16-bit segments, and adds the 16-bit segments to the carry, thereby obtaining a final sum; the carry occurs in the final sum, the conversion unit excludes the carry from the final sum and

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adds the carry to the carry-excluded final sum, thereby outputting a carry-added final sum (col. 4, lines 1-18).

As to claim 9, Alferness (fig. 12) shows a method of generating a checksum, the method adding input data until a predetermined control signal is received (col. 10, lines 40-64); outputting a sum and a carry obtained from the addition result when the control signal is received (fig. 12, block 200); and adding the sum and the carry and converting the added sum and carry to a checksum (fig. 12, block 190).

As to claims 10-12, Alferness teaches a method of generating a checksum, wherein the checksum is converted to a value of 16 bits (fig. 11); the control signal is output when an amount of data corresponding to input data length information is received (col. 6, lines 12-34); the data is received in units of $n \times 16$ bits and an addition is performed on the received data (col. 10, lines 4-39).

As to claims 13-15, Alferness teaches a method of generating a checksum, wherein the adding of the sum and the carry comprises adding the 16-bit segments to obtain a final sum (col. 4, lines 1-18); a second carry occurs in the final sum, the second carry is excluded from the final sum and added to the carry-excluded final sum (fig. 12), to output a carry-added final sum; outputting a 1's complement value of the carry-added final sum as a 16-bit checksum (col. 10, lines 4-39).

As to claims 16-17, method claims 16-17 corresponds to apparatus claims 7-8; therefore, they are analyzed as previously discussed in claims 7-8 above.

As to claim 18, Alferness teaches a computer-readable storage medium storing a program (fig. 12) executable by a computer (note computer 2200; col. 11, lines 15-34), the program

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comprising instructions for enabling the computer to perform a method of generating a checksum (col. 7, lines 25-42), wherein the program comprises instructions for adding input data until a predetermined control signal is received (col. 10, lines 40-64); instructions for outputting a sum and a carry obtained from an addition result when the control signal is received (fig. 12, block 200). Furthermore, Alferness teaches and instructions for adding the sum and the carry and converting the added sum and carry to a checksum (fig. 12, block 190).

7. Claims 19-22 are rejected under 35 U.S.C. 102(b) as being anticipated by McCoy (U.S. Pat. No. 5,912,909).

As to claims 19 and 20, McCoy (figs. 2-3) shows an apparatus for generating a checksum, the apparatus comprising: first adder (210) adding a predetermined number of bits of input data (A, B) received in units of $n*m$ bits (220), to obtain a first sum (232) having $n*m$ bits and a first carry; a partial sum calculator partitioning the first sum into n segments of m bits and adding the m -bit segments to obtain a second sum; a second adder (212) adding the second sum and the first carry to obtain a third sum and a second carry; a third adder (240) adding the third sum and the second carry to obtain a fourth sum (col. 4, lines 6-32; col. 4, lines 64 through col. 5 line 9); and a complement calculator outputting a 1's complement value of the fourth sum as an m -bit checksum (col. 1, lines 50-63).

As to claim 21, method claim 21 corresponds to apparatus claim 19 and 20; therefore, it is analyzed as discussed in claims 19 and 20 above.

As to claim 22, McCoy discloses a method, wherein: if a second carry is generated in the adding of the second sum and the first carry, the method further comprises: adding the third sum

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and the second carry to obtain a fourth sum, and replacing the third sum with the fourth sum in the outputting of the l's complement value as the m-bit checksum.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fritz Alphonse, whose telephone number is (571) 272-3813. The examiner can normally be reached on M-F, 8:30-6:00, Alt. Mondays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jacques Louis-Jacques, can be reached at (571) 272-6962.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-3824

Information regarding the status of an application may also be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/FA/

Examiner, Art Unit 2112

October 9, 2008.

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/JACQUES H LOUIS-JACQUES/

Supervisory Patent Examiner, Art Unit 2100